TECHNICAL MANUAL

City M

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1. Purpose

This technical manual is part of the documentation that must be available under appendix 5 of the machine directive. The purpose of the manual is to give details of the units design and how it works. New users must be able to work safely with this product.

2. CONTENTS

This manual gives details of the *product* and must not be used for any other machine. Besides short explanations of what the machine is used for, the first few sections also give some technical specifications. After these, there are illustrated texts about the various parts that make up this product. The user manual also includes details of safety procedures associated with the use of the machine.

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3. Version history

Version	Date	Signature	Altered
001	See approval		Initial version

4. Identification plate

All *Camfil City M* air purifiers have the identification plate at the power supply to the unit.

5. Guarantees and undertakings

The guarantee relates to full functionality as per the details in this User Manual and covers errors in software and hardware for a period of one year from the delivery date.

Should the equipment develop a fault, please contact your distributor.

Distributor:

Camfil Svenska AB
Industrigatan 3
SE-619 33 TROSA
Tel: +46 (0)156 537 00
Web: www.camfil.com

6. Preface

Thank you for buying a high quality air purifier from Camfil.

We hope that you will be delighted with the use of your Camfil *air purifier.*

Important!

Before using your high quality air purifier, it is important that you, as the user: 1) read this User Manual; 2) read the fan instructions; and 3) follow the safety instructions in both documents.

7. Technical specifications

External dimensions, vertical model

Height: 703 mm

Width: 329 mm

Depth: 338 mm

Weight: 16 kg (including new filters)

Filter weight: 4.3 kg (2 filters are needed)

7.1 Fan specifications

Type	**K3G190-RC05-03**	
Motor	**M3G055-BI**	
Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 240
Frequency	Hz	50/60
Type of data definition		ml
Speed	min^{-1}	3200
Power input	W	83
Current draw	A	0.75
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	+60

ml = max. load · me = max. efficiency · fa = running at free air · cs = customer specs · cu = customer unit
Subject to alterations

7.2 Air flow

0 m³/h to 430 m³/h in 6 different speed settings.

With Gigalam NXPP H13

Camfil CityM with K3G190RC0503 Filter 2 Article No.: 56160011 (sucking side Free air @ 0pa)				
Level	**Airflow qV [m³/h]**	**Speed n [u/min]**	**Input power Pe [W]**	**Sound pressure level sucking side LpA ss [dBA]**
1	37	520	4	≤15,0~16,0 *
2	67	728	5	≤15,0~16,0*
3	94	907	6	≤15,0~16,0*
4	127	1072	7	21,7
5	251	1772	19	37,7
6	433	2733	55	52,6

8. Use

The air purifier is used to clean indoor air by mechanically filtering, through highly efficient filters.

Development of the system is primary for expert users and installation companies for offices, hospitals and schools.

.9. Safety instructions

Read the technical manual and follow the instructions.

The machine's power supply has to be disconnected during installation, servicing, maintenance and filter replacement.

CAUTION: Pull out the electrical connector or use the safety switch when working on the product.

The machine is not to be regarded as de-energised until 5 minutes after disconnection from the power supply.

Rotating parts do not stop immediately once power has been cut or the machine has been switched off. Allow 5 minutes to elapse before handling the cabinet.

1. In its standard version, this product must only be used for handling dry non-explosive materials. If the air purifier is used for purposes other than those set out in the technical Manual, or is handled otherwise than set out therein, Camfil AB can accept no liability whatsoever for the consequences of said use/handling.
2. NOTE: Fixed installation may only be carried out by a professional with the appropriate qualifications who takes responsibility for the installation.
3. The machine must not be used in ATEX classified areas or where explosive gases may be present at any time.
4. Electrical connection may only be carried out by an appropriately qualified electrician.
5. All accessories, filters, spare parts, etc., used must be approved by Camfil. Guarantee undertakings cease to apply if the foregoing is not respected. Please contact Camfil for the correct accessories.
6. Do not cover inlets or outlets.
7. Inserting objects through inlets or outlets is forbidden.
8. *The unit* must not be used in environments where burning/smouldering objects can get into the machine.
9. *The unit* must be used indoors only.
10. *The unit* must be used in the -25˚C – 60˚C temperature range only.
11. *The unit* must not be drenched with water. The highest permitted humidity is 85% if a carbon filter is used.
12. Follow the filter handling and replacement instructions very carefully. Incorrect handling can damage the filter medium and the guaranteed filter class will not be achieved as a result.
13. Take great care when handling used filters. Incorrect handling can result in ill health or sickness. Follow the instructions for filter replacement.

10. Design

The unit is a self-standing one-section design housing the filters, fan section and all electrical connections.

The machine is entirely constructed of aluminium and plastic parts and is therefore environmentally friendly and recyclable.

10.1. Constituent standard components

In its standard version, the air purifier is supplied with the following components:

- One *CamCleaner City M* unit.
- Filters for the chosen purpose.
- Quick guide.
- Technical Manual.
- Fan instructions (from the fan supplier).
- Electrical connector

If anything is missing, or if you require further information about accessories, please contact Camfil.

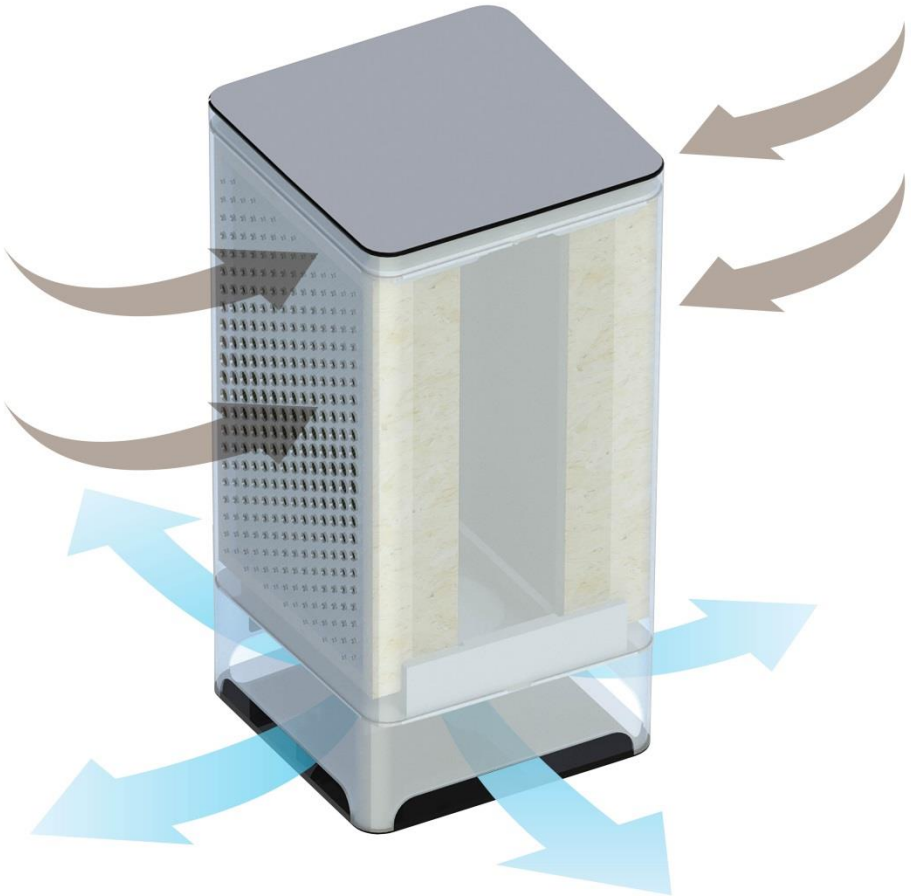
11. Transport and unpacking

Remove the packaging carefully. If sharp objects are used to unpack the product, be careful not to damage the machine's cables and design finish.

Take special care when handling the filters. See the filter replacement section.

Check that the product has not been damaged during transport. Report any transport damage to the carrier. Check also that the delivery is complete.

10.2. Air flow details



12. Taking into operation

First, read the entire Technical Manual.

Only appropriately qualified electricians may carry out work with electrical connections.

You must be able to turn off the power supply without touching the unit.

1. Connect the air purifier to the electrical outlet. Ensure that there is nothing obstructing the air

Outlets / inlets (see figure below how to operate).

Controller card description

Press + increase the airflow (the blue led indicators will guide you to what airflow you have chosen)

Press – (minus) to lower the airflow

A red warning light will be lit at the filter change symbol, when it's time for filter replacement.

When the red warning light have been lit and filter are replaced you need to calibrate the unit by press + an- at the same time during 5 seconds. Now you are secured that the warning light will be lit again when it's time for filter replacement.

On the back side of the unit is the electrical connector with fuse holder and machine plate..

12.1. Positioning

The unit must always be positioned and used indoors only.

Air outlets and intakes must not be obstructed during use. Before putting the air purifier in operation, ensure there is sufficient space (10 cm) around the outlet and inlet.

12.2. Electrical connection

Electrical connection must be carried out by an appropriately qualified electrician. All routing of cables, etc., must be carried out in accordance with the relevant regulations. *The unit* comes from the factory ready for plugging in. Any alterations to the machine's internal electrical systems must only be carried out by appropriately qualified persons using equipment supplied by Camfil.

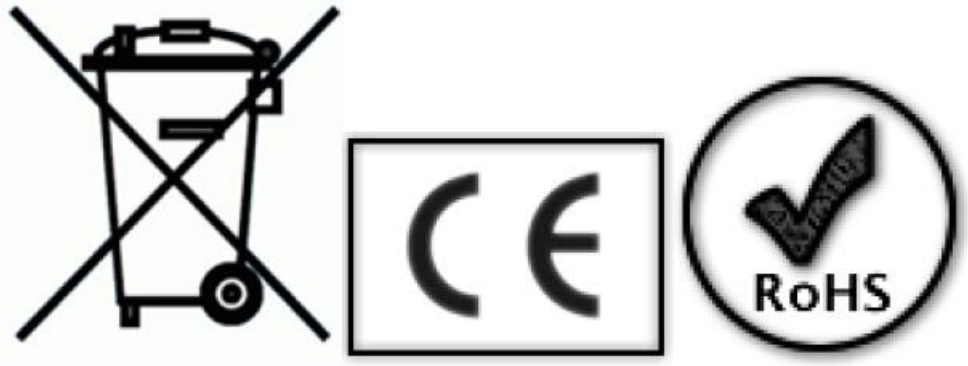
The unit must only be connected to the network voltage stated on the machine plate (identification plate).

14. *Product* and environment

The air purifier is made from lead-free components. It can be recycled. Used models must always be sent to a recycling station for correct recycling and/or disposal of parts and components.

14.1. Filters and the environment

Note that filters must not be disposed of along with ordinary household waste. Scrapped filters must always be correctly taken care of and handled safely. Recycling or disposal must always be carried out at an approved waste facility. If you have any questions about this, please contact your local authority or distributor for advice on correct care.



15. Maintenance

If necessary, the *unit* can be cleaned using a mild cleaning agent.

Before cleaning, always switch off the machine and pull out the electrical connector!

16. Instructions for replacing filters

WARNING! When handling used filters, personal protective equipment such as protective gloves and masks must be used. To choose the correct type of respiratory protection, consult either the safety representative/officer at your workplace or the manufacturer of the respiratory protection.

Used filters may contain harmful substances and particles. With incorrect handling, these can escape to the environment and present risks of sickness and ill health.

Filters should be replaced on a continuous basis. See Camfil AB's recommendations concerning the frequency of filter replacements.

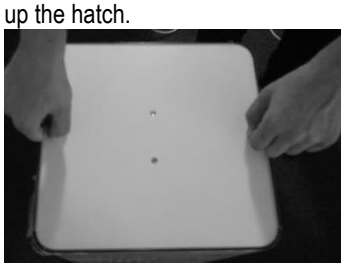
16.1. Filter replacement

Always use protective gloves and respiratory protection when handling used filters! Risk of ill health and sickness.

1. Switch off the unit by turning the safety switch or remove the electrical connector. Make sure that the blue operating LED's is off.

2. Lift of the top cover of the unit new picture

3. Turn the two knobs counter clockwise and lift up the hatch.



4. Take a firm grip on the pull the hatch upwards.

5. Grip the handle on top of the filter and pull it towards you. Put the filter in a plastic bag.

Do the same procedure on the other filter and put it in a plastic bag.

5.

Take a new HEPA filter out of its box. *NB! Do not touch the filter's surface. Hold the handle only!*

Put the filter in its positioning press it down and against the pattern of holes. The black gasket must be towards the hole pattern of the unit.

Do steps 1- 5 in reverse order.

18. EU provisions governing the product

This product complies with EU standards as per the “Machinery Directive” (2006/42/EC), the “Low Voltage Directive” (2006/95/EC) and the “EMC Directive” (2004/108/EC).

Note that correct observance of the installation and safety instructions is a precondition for the compliance of all operating properties.

For more details of technical specifications, the standards that have been complied with and Camfil’s patents, please contact Camfil.

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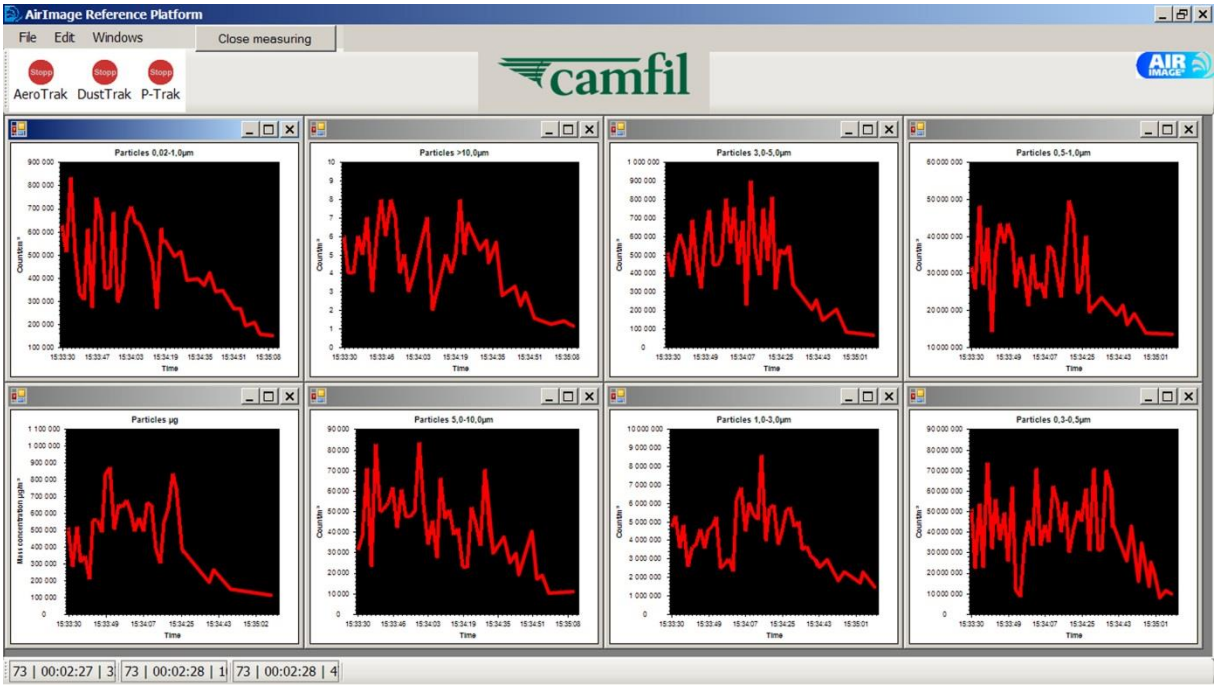
Camfil IAQ Analysis – monitors and measures your air quality in real time.

IAQ stands for Indoor Air Quality and is a measurement of the quality of indoor air. As an additional option for your CamCleaner system, you can choose Camfil IAQ Analysis, which provides a direct picture of the air quality in your rooms. We monitor the air quality and all measurements are saved in an IAQ database containing millions of measurement values and benchmarks for the indoor environment and air quality. As a customer, you have the option to view the analysis in real time at the time of measuring, and all measurements can easily be compared with one another. A calibrated particle counter can be used to examine the quantity of particles in the air. By subscribing to this service, you, as our customer, will always have a particle counter on location that is connected to a computer monitoring the indoor environment. When an abnormal particle distribution is identified, or in cases of other suspected problems, we perform an analysis with a scanning electron microscope (SEM) with associated X-ray analysis system (EDAX). As required, the quantity, weight and structure of the particles are analyzed, as well as the chemical composition of the air and element content. We have more than 10 years of experience from these analyses. We also work together with many of the world's leading laboratories for further analysis. Our IAQ reports are based on the following standards for air classification: SS EN, SS EN ISO and IEST.



CAMFIL FARR

– the world's largest and leading manufacturer of filters and clean air solutions

There is a good chance that, at this very moment, you are breathing clean air that has passed through a filter manufactured by us. Our products can be found everywhere from offices, clean rooms for sensitive electronics production and mines to factories, hospitals and nuclear power stations. Camfil Farr is a global company with 29 subsidiaries, 23 production plants and an extensive network of agents in Europe, the Americas and the Asia-Pacific region.

CamCleaner

CamCleaner is synonymous with high efficiency purification, energy savings and almost silent operation. Unlike all other air purifiers on the market, our HEPA filters offer a degree of purification that can eliminate the tiniest and most difficult-to-remove particles. CamCleaner is also entirely unique in that it can suck in air from two directions, allowing different cleaning zones and increasing the efficiency of air purification considerably.